We claim:

1. A method of determining hormonal effects of substances, said method comprising the steps of:

a) contacting a test substance with Ewing sarcoma protein (EWS) or a derivative of said Ewing sarcoma protein and with a nuclear receptor (NR) or a derivative of said nuclear receptor; and

b) determining the effect of the test substance on binding of said Ewing sarcoma protein (EWS) or said derivative of said Ewing sarcoma protein with said nuclear receptor or said derivative of said nuclear receptor; or

c) determining the effect of the test substance on ligand-induced activity of said nuclear receptor.

2. The method as defined in claim 1, further comprising performing at least one of said steps in a cellular system.

3. The method as defined in claim 2, further comprising the additional steps of:

a) exposing cells, which express said Ewing sarcoma protein or said derivative of said Ewing sarcoma protein and nuclear receptor or said derivative of said nuclear receptor, to said test substance to be tested; and

b) measuring protein-protein interaction or protein-protein-DNA interaction in order to determine the effect of the test substance on interaction between said

Ewing sarcoma protein (EWS) or said derivative of said Ewing sarcoma protein and said nuclear receptor or said derivative of said nuclear receptor.

4. The method as defined in claim 3, wherein said cells are eukaryotic cells.

5. The method as defined in claim 3, wherein said cells are eukaryotic cells and said eukaryotic cells are selected from the group consisting of prostate cells, nerve cells, glia cells, fibroblasts, blood cells, osteoblasts, osteoclasts, hepatocyes, epithelial cells and muscle cells.

6. The method as defined in claim 2, further comprising the additional steps of:

a) exposing cells, which express said Ewing sarcoma protein or said derivative of said Ewing sarcoma protein and nuclear receptor or said derivative of said nuclear receptor and are transfixed with a reporter gene construct, to said test substance to be tested and ligands of the nuclear receptor; and

b) measuring reporter gene activity to determine transcription activity of the nuclear receptor; and

c) comparing the transcription activity determined in step b) with transcription activity determined by repeating steps a) and b) in the absence of said test substance.

7. The method as defined in claim 6, wherein said cells are eukaryotic cells.

8. The method as defined in claim 6, wherein said cells a eukaryotic cells and said eukaryotic cells are selected from the group consisting of prostate cells, nerve cells, glia cells, fibroblasts, blood cells, osteoblasts, osteoclasts, hepatocyes, epithelial cells and muscle cells.

9. The method as defined in claim 1, wherein said derivative of said Ewing sarcoma protein is obtained by amino acid deletion, substitution, insertion, inversion, addition or exchange of a polypeptide coded by a nucleic acid sequence according to Seq. ID No. 1.

10. The method as defined in claim 1, wherein said nuclear receptor is an androgen receptor, α-estrogen receptor, β-estrogen receptor, progesterone receptor, glucocorticoid receptor, mineralocorticoid receptor, thyroid gland hormone receptor, vitamin-D receptor, peroxisome proliferator-activated receptor, retinic acid receptor, retinoid-X receptor or an orphan receptor.

11. The method as defined in claim 10, wherein said nuclear receptor is said androgen receptor.

12. A method for determining interference of a co-modulator mechanism between an androgen receptor and Ewing sarcoma protein, said method comprising measuring at least one of cellular concentrations and tissue concentrations of said androgen receptor and said Ewing sarcoma protein.

13. The method as defined in claim 12, wherein said measuring of said concentrations is performed by radio immunoassay, ELISA, immunodyeing, RT-PCR, Western blot or Northern blot.

14. A method for identification and characterization of substances that influence nuclear receptor activity, said method comprising using Ewing sarcoma protein or a derivative of said Ewing sarcoma protein that modulates activity of at least one nuclear receptor for said identification and said characterization of said substances that influence nuclear receptor activity.

15. A method for identification and characterization of substances that influence nuclear receptor activity, said method comprising using Ewing sarcoma protein or a nucleic acid coding for a derivative of said Ewing sarcoma protein for said identification and said characterization of said substances that influence nuclear receptor activity.

16. The method as defined in claim 15, in which said nucleic acid is cloned in an expression cassette of an expression vector.

17. The method as defined in claim 15, wherein said nucleic acid has at least 70 % homology to Seq. ID No. 1, or to sequence region 8 to 2032 or sequence region 1000 to 2011 of said Seq. ID No. 1.

18. The method as defined in claim 17, in which said nucleic acid is cloned in an expression cassette of an expression vector.

19. A method of diagnosing illnesses, which are brought about by dysfunction of a nuclear receptor, said method comprising using a nucleic acid with at least 70 % homology to Seq. ID No. 1, or to sequence region 8 to 2032 or sequence region 1000 to 2011 of said Seq. ID No. 1, or using an antibody that acts against a protein coded by said nucleic acid.

20. The method as defined in claim 19, wherein said nuclear receptor is an androgen receptor.

21. A method of therapeutically treating illnesses, which are brought about by dysfunction of a nuclear receptor, said method comprising using a protein coded by a nucleic acid with at least 70 % homology to Seq. ID No. 1, or to sequence region 8 to 2032 or sequence region 1000 to 2011 of said Seq. ID No. 1, or using an anti-sense nucleic acid acting against said nucleic acid.

22. The method as defined in claim 21, wherein said nuclear receptor is an androgen receptor.